

BECVAROVA, Hana; HANC, O.; MACEK, K.

Course of transformation of benzaldehyde by *Saccharomyces cerevisiae*.
Folia microbiol. 8 no.3:165-169 '63.

1. Research Institute for Pharmacy and Biochemistry, Prague 3.
(ALDEHYDES) (METABOLISM) (SACCHAROMYCES)

MACEK, K.; VANECEK, S.; BECHVAROVA, H.

Chromatographic determination of some intermediate products
of ephedrine synthesis. Coll Cz Chem 29, no. 1:311-315 Jan '64

1. Forschungsinstitut für Pharmazie und Biochemie, Prag.

BECZAR, Jiri (Liberec)

"Introduction to mathematical logic" by Gunther Asser.
Reviewed by Jiri Becvar. Cas pro pes mat 87 no.2:235-237
'62.

BECZASSY, Z.

"Observations concerning the designing and guiding principles for the water equipment and canalisation of kindergartens." p. 117.

EPÜLETGÉPESZET. (Építőipari Tudományos Egyesület). Budapest, Hungary, Vol. 8, No. 3, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

BEZASSY, Zoltan

An account of a study tour of Moscow, Leningrad and Helsinki.
Epuletgepeszet 13 no.6:228-231 D '64.

BECZE, J.

"The Kind of Mules We Need in Hungary", P. 122, AGRARTUDOMANY, Vol. 6,
No. 4, Apr. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

BECZE, J.; VASKUTI, L.

"Experiences Gained From the Correct Raising of Mule Foals", P. 124,
(AGRARTUDOMANY, Vol. 6, No. 4, Apr. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

BECZE, JOZSEF.

AGRICULTURE

A szamar tenyésztése es az oszver. Budapest, Mezogazdasagi Kiado,
1955. 130 p.

Monthly List of East European Acquisitions (EEAI), LC, Vol. 6, No. 3
March 1959 Unclass.

HUNGARY/Farm Animals. Horses.

Q

Abstr Jour: Ref Zhur-Biol., No 20, 1958, 92553.

Author : Csah, S., Becze, J.

Inst : AS Hungary

Title : Parasympathetic Stimulants in the Treatment of
Sterile Heavy Draft Horse Mares.

Orig Pub: Acta veterin Acad. sci. hung. 1957, 7, No 1, 1-10.

Abstract: The parasympathetic stimulants, enterotonin and
eserine speeded up the advent of estrus after per-
turbation and shortened its duration. The average
number of days until estrus appeared after giving
birth was: in the experimental mares 7.3 days, and
in the control mares - 8.7 days. The duration of
estrus was correspondingly 5.54 and 6.25 days. The
number of fecundated animals in the experimental

Card : 1/2

Becze, J.; Bertok, L.

Histological investigation of the testical of hybrids and biochemical investigation of the ejaculation of mules. p. 361.

A MAGYAR TUDOMÁNYOS AKADÉMIA V. ORSZÁGOS BIOLÓGIAI CSOPORTJÁNAK KÖZLEMÉNYEI.
Budapest, Hungary. Vol. 2, No. 3, 1958

Monthly List of East European Accessions (LEAI). LC. Vol. 9, No. 1, Jan 1960
Uncl.

BEZE, J.

Investigation of the genital function of hybrids with female genital organs of mules. p. 155.

A MAGYAR TUDOMANYOS AKADEMIA V. OKZTALAY BIOLOGIAI CSOPORTJANAK KOSIEMENSI.
Budapest, Hungary. Vol. 3, no. 2, 1959

Monthly list of East European Accessions (EEAI). II. Vol. 9, no. 1, Jan., 1960. Uncl.

HUNGARY

BECZE, Jozsef, Dr; Research Institute for Animal Breeding (Allattenyesz-
tesi Kutato Intezet) (director: TANGEL, Harald, Dr, doctor of agricultural
sciences), Department of Biology of Reproduction (Szaporodasbiologiai
Csztalya) (chief: BECZE, Jozsef, Dr, candidate of veterinary medicine)

"Data on the Physiology of Hog; Proliferation and Proliferative Dis-
turbances."

Budapest, Magyar Allatorvosok Lapja, Vol 17, No 12, Dec 62, pp 469-471.

Abstract: The author discusses the relationship between quality of
fodder and the age of sexual maturity in hogs. The oestrous cycle, the
difficulties in determining the time of ovulation accurately and the
most suitable time for copulation for the avoidance of polyspermic
processes is discussed.

[1 Soviet, 9 Western references]

1/1

37

BECZE, J.

Histochemical studies on placentae of healthy and atrophic porcine fetuses. Acta veter Hung 12 no.2:157-163 '62.

1. Dept. of Biological Reproduction, Research Institute for Animal Husbandry, Budapest.

BECZE, Jozsef, dr., az allatorvostudomanyok kandidatusa; HOLDAS, Sandor, dr., a mezogazdasagi tudomanyok kandidatusa

Effect of vitamin A on the reproduction processes of sows.
Magy allatorv lap 17 no.7:251-253 JI '62.

1. Allattenyesztesi Kutatointezet (igazgato: Tangl Harald dr., a mezogazdasagi tudomanyok doktora) Szaporodasbiologiai Osztalya (vezeto: Becze Jozsef dr., az allatorvostudomanyok kandidatusa) es Sertestenyesztesi Osztalya (vezeto: Kertesz Ferend dr., a mezogazdasagi tudomanyok kandidatusa).

BECZE, Jozsef, dr., az allatorvostudomanyok kandidatusa; HOLDAS, Sandor,
dr., a mezogazdasagi tudomanyok kandidatusa

Effect of vitamin A on the reproduction processes of sows.
Magy allatorv lap 17 no.7:251-253 J1 '62.

1. Allattenyesztesi Kutatointezet (igazgato: Tangl Harald
dr., a mezogazdasagi tudomanyok doktora) Szaporodasbiologiai
Osztalya (vezeto: Becze Jozsef dr., az allatorvostudomanyok
kandidatusa) es Sertestenyesztesi Osztalya (vezeto: Kertesz
Ferenc dr., a mezogazdasagi tudomanyok kandidatusa).

BECZE, Jozsef, dr.

"Calcium and phosphorus needs of horned cattle during the various periods of their life" by E. Gutke. Reviewed by Jozsef Becze. Magyar allatorv lap 17 no.8:315 Ag '62.

BECZE, Jozsef, dr.

"Studies on the dilution and storage of fowl semen" by P. Lake.
Reviewed by Jozsef Becze. Magyar Allatorv. Lap 17 no.8:318 Ag '62.

BECZE, Jozsef, dr.

"Examination of the breeding capacity and fertility of Swiss brown
bulls in natural mating" by W. Engler, A. Celayir. Reviewed by Jozsef
Becze. Magyar Allatorv. Lap 17 no.8:318 Ag '62.

BECZE, Jozsef

Examination of the conception and animal breeding problems in conjunction with the first (earlier) mating. Allattenyasztes 13 no.4:289-301 P '64.

1. Division of Reproduction Biology of the Research Institute of Animal Breeding, Budapest. Submitted May 10, 1961.

HUNGARY

~~BECZE, Jozsef, Dr.~~ Research Institute of Animal Breeding (director: TANGL, Harald, Dr, dr of agr. sci.), Department of Reproduction Biology (head: BECZE, Jozsef, Dr, cand. of vet. sci.) (Allattenyesztesi Kutatointezet, Szaporodasbiologiai Osztaly).

"Study of Factors Inducing Seasonal Ovulation in Sheep Using the Mono-estrous Breed Cigaja, with Special Emphasis on the Separation of the Effects of Light Conditions and Hormonal Variations."

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 2, Feb 66, pages 67-71.

Abstract:[Author's English summary modified] Studies were conducted for the possible evaluation of the respective influence of light conditions and hormones, and of their interaction, on the seasonal estrus of the cigaja, regarded as a monoestrous breed of sheep. Twenty of 30 ewes lambed in February were kept in dark stables for increasing lengths of time between 20 Apr-8 Jun, the most unfavorable period of conception, while the rest were kept under normal conditions. Ten animals kept in dark stables were given progesterone plus P. M. S. (serum of pregnant mares). For 7 days, 10 mg/animal/day of progesterone was administered and 1000 I.U. of P.M.S. on the 8th day. The same treatment was given to animals kept under normal conditions. All of the animals on hormone therapy plus changes in light came into heat and 6 lambed (7 lambs). After hormonal treatment alone, 6 ewes came into heat and 4 lambed (4 lambs). Of animals exposed to changing light conditions alone, 1 came into heat and lambed. 2 Hungarian, 19 Western
1/1 references.

BECZEK, Tadeusz

Short outlines of the boring balance for 1963. Wiad naft
10 no.3:59-61 Mr'64

GIFRMANSKI, Adam, mgr inz.; BECZEK, Tadeusz

Course of performance of the Swidwin 3 borehole. Nafta Pol
20 no.2:40-44 F '64.

1. Zjednoczenie Przemyslu Naftowego, Warszawa.

BECZEK, Tadeusz

Borings in 1963. Nafta Pol 20 no. 7: 93-195 J1 '64.

1. Association of Petroleum Industry, Warsaw.

YECZEK, Tadeusz

Production tasks as carried out by the Association of the
Petroleum Industry in 1964. Nafta 21 no.4:120-122 Ap '65.

S/137/62/000/011/002/045
A052/A101

AUTHORS: Beczowski, Włodzimierz, Deminet, Henryk, Długosz, Józef, Garba-
ciuk, Tadeusz, Gaska, Bohdan, Gaska, Zdzisław, Izbicki, Wacław,
Łuczak, Szymon, Maciesowicz, Roman, Morawski, Romuald, Szczepanik-
Dzikowski, Zbigniew

TITLE: Continuous furnace for shield annealing

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 10, abstract
11B56P (Pol. pat., no. 44895, September 21, 1961)

TEXT: A continuous vertical type inverted U-shaped furnace for shield
annealing consists of corresponding heating through compartments with electrical
heating. A chain conveyer with suspenders (or baskets) for annealed pieces pas-
ses through the furnace, whereby in the lower part of the furnace the conveyer
passes through gate- with attachments filled with a liquid (e.g. water). When
the workpieces are charged the conveyer with suspenders sinks into the liquid
and emerges already in the heating compartments. In its surface part the liquid
is in a state near to boiling and the vapor produces the necessary shield in the

Card 1/2

Continuous furnace for shield annealing

S/137/62/000/011/002/045
A052/A101

furnace. To stir the shielding atmosphere and to equalize the temperature, ventilators are installed in the middle of two branches of the furnace.

S. Glebov

[Abstracter's note: Complete translation]

Card 2/2

BECZNER, Kalman, muszermérnök

Directly recording instruments. Meres automat 9 no.8-9:268-271
'61.

1. Kozmuipari Vallalat.

18

Anticorrosion and antifreeze liquid, especially for wet gas meters. JÓSEF BÉCKÉY and GYULA KERTÉSZ. Hung. 104,211, March 26, 1931. Dry chlorides of alkali metals are added to dry chromates or dichromates of alkali metals and the mixt. is moistened with an emulsion of heavy hydrocarbons.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. TITLE AND SUBJECT		2. AUTHOR AND ORIGIN	
<p>CA</p> <p>Apparatus for nongravimetric estimation of carbon monoxide. <i>Found. Res. Rep. Marjor Kam. Lopp 3, 400(1948).</i>—A special glass bulb with a tap was constructed. It is equipped with a filling of 0.2% palladium chloride soln. and evacuated to an abs. pressure of 20 mm. In investigations on the spot the app. is opened and the air is allowed to bubble through the liquid. The approximate CO content can be estimated on the basis of the time within which the liquid turned dark, or within which a ppt. appeared: e.g., darkening in 33 min. indicates 0.02% CO, in 5 min. 0.05%, and in 1 min. 0.30% CO. I. F.</p>		<p>1</p>	
<p>ASB-514 METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>1. SOURCE</p>		<p>2. SOURCE</p>	
<p>1. SOURCE</p>		<p>2. SOURCE</p>	

5388. APPARATUS FOR SEMIQUANTITATIVE ESTIMATION OF CARBON MONOXIDE, Becskoy, J. (Magyar Kem. Lapja, 1948, vol. 3, 460; abstr. in Chem. Abstr. 1949, vol. 43, 8749). A special glass bulb with a tap was constructed. It is equipped with a filling of 0.2% palladium chloride solution, and evacuated to an absolute pressure of 20 m.m. In investigation of the spot, the apparatus is opened and the air is allowed to bubble through the liquid. The approximate CO content can be estimated on the basis of the time within which the liquid turns dark, or within which a precipitate appeared; e.g., darkening in 30 min. indicates 0.02% CO, in 5 min. 0.06%, and in 1 min. 0.20% CO.

C.A.

<p>Magyar Kemikusok Lapja Journal of the Hungarian Chemical Society vol. V 1950 no.12 december</p>		16
<p><u>J. Becskényi</u> pp. Volumeters and regulators 373-380 Innovations. -- A device for continuous distillation, by E. Herczeg, Gy. Lugosi and associates 381 Technical review: Abstracts from various trade journals. 382</p>		
<p>ASB.11A METALLURGICAL LITERATURE CLASSIFICATION</p>		
<p>FROM SOURCE</p>		
<p>10000 110 000 000</p>		
<p>RELATIONS</p>		
<p>10000 110 000 000</p>		

BECZKOY, J.

Hungarian Technical Abst.

Vol. 5 No. 2

1953

662,998
14. Heat insulation by the spraying process - 116.
szigetelés szórócsővel - J. Beczkóy and G. Mátyás.
(Hung. Power Economy - *Magyar Energiagazdaság*
- Vol. 5, No. 5, May 1952, pp. 138-142, 3 figs.)

A method of insulating vehicles, especially railway cars, by the spraying process was tested and the numerical data for carrying out the method determined by experiments. Various types of asbestos were compared; the Soviet asbestos was found to be very suitable for the tested method. Experiments were also made with Hungarian glass wool cut into short lengths; after spraying, the insulating layer was found to have a considerably lower heat-transfer coefficient than asbestos. The expensive preparation and drying of the material before spraying can be omitted and the insulation executed in one operation if a solution of the bonding agent instead of water is used for moistening the material. The various bonding agents used in the experiments were all of domestic origin. Instructions were elaborated for testing sprayed insulations.

J. Beczkóy

2807 K O Y, J

Magyar Energetikai és Atomenergia Minisztérium
Magyar Energetikai és Atomenergia Minisztérium

An apparatus has been designed suitable for taking gas samples at the various points in a furnace. The sampling tube may be directed at any point in the inside of a large imaginary conical body, the position of the suction end of the tube is indicated in all three dimensions. The position of the end of the sampling tube is given in a polar system of coordinates. The depth of the point of sampling can be read on the sampling tube itself.

BECZKOY, J.

"A new filling liquid for Rabe's manometer."

p. 121 (Energia Es Atomtechnika) Vol. 10, no. 2/3, May/June 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (ZEAI) LC. Vol. 7, no. 4,
April 1958

BECZKOY, J.

"New trends in the instrumenting of heat power engineering."

p. 289 (Energia Es Atomtechnika) Vol. 10, no. 5/6, Aug. 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

BECZKOY, J.

"The water dynamo."

p. 291 (Energia Es Atomtechnika) Vol. 10, no. 5/6, Aug. 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

BECZYNSKI, Bronislaw

Magnetic railroad sensing devices. Przegl kolej elektrotech 15 no.1:
23-24 Ja '63.

1. Dyrekcja Okregowa Kolei Panstwowych, Olsztyn.

L 2153-66 ENT(m)/T/EWA(m)-2 GS

ACCESSION NR: AT5007951

UY0000/64/000/000/0819/0820

AUTHOR: Burgov, N. A.; Beda, A. G.

TITLE: Concerning the formation of the high-energy μ -meson beam

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 819-820

TOPIC TAGS: high energy particle, muon, particle beam, pion

ABSTRACT: To obtain a beam of μ -mesons of high energy (of the order of several billion electron-volts) is a rather complex problem, because the μ -meson appears mainly during the decay of π -mesons, and the free-path length L_π (in meters) of π -mesons of large momentum p_π is great. The length is given by the relation $L_\pi = 7.62 \frac{p_\pi}{m_\pi c}$. Further, a μ -meson of given momentum can appear as a result of the decay of a π -meson whose momentum lies within wide limits. Thus, in order to obtain a beam of high-intensity μ -mesons it is necessary to select μ -mesons that have been obtained from the decay of π -mesons of various momenta and at various distances from the point of formation of the π -meson. This problem can be solved by applying a strongly focusing channel which consists of quadrupolar lenses. The

Card 1/3

L 2153-66

ACCESSION NR: AT5007951

cost, however, of such a channel will be rather high, because it must consist of a large number of lenses. To obtain a beam of μ -mesons the authors propose employing a system of parallel conductors along which a high-strength current flows. The π -mesons and the μ -mesons obtained during their decay move in the directions close to the axis of the conductors. The authors study the magnetic field of n infinite round conductors parallel to each other and arranged at the corners of a regular n -gon. The field is described by the vector potential

$$A_x = A_y = 0,$$

$$A_z = -\frac{0.1I}{n} \ln(R^{2n} + r^{2n} + 2R^n r^n \cos n\phi).$$

where I/n is the current in each of the conductors, in amperes; R is the distance from center of the regular n -gon to each of its corners; r and ϕ are polar coordinates. The motion of a charged particle around such a system of conductors, with certain simplifying assumptions, is discussed on the basis of the pertinent equations of motion. Particles of one sign describe oscillatory motions around such a system conductor. Particles of another sign are deflected to the side of this system. The motion is determined by a certain dimensionless parameter:

$$\beta = 16700 \frac{p(\text{Mev}/c)}{I(a)}$$

Card 2/3

L 2153-66

ACCESSION NR: AT5007951

3

The mathematics laboratory of the Institute of Theoretical and Experimental Physics (R. S. Guter, N. V. Marchenko, and Ye. F. Leferov) solved by the Monte Carlo method the problem of the motion of π -mesons and μ -mesons in the magnetic field of the indicated system of conductors and the problem of the incidence of μ -mesons against a target of given diameter. The trajectories of the π -mesons proceeding from a point lying on the axis of symmetry were traced. The proposed system for the separation of μ -mesons, it is concluded, is considerably cheaper than a system connected with a channel made of quadrupolar lenses. At the present time electrical tests are being conducted on one section of such a "meson-guide" made full size. Orig. art. has: 2 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE SSSR (Institute of Theoretical and Experimental Physics, GKAE SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP. CE

NO REF SOV: 000

OTHER: 000

Card 5/3

BURGOV, N.A.; BEIDA, A.G.

Formation of high-energy muon clusters. Prib. i tekhn. eksp. 10 no.1:
21-24 Ja-F '65. (MIRA 18:7)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo
komiteta po ispol'zovaniyu atomnoy energii.

BEDA, A. G., BURGOV, N. A., DAVYDOV, A. V., and BIZINA, G. YE.,

"Resonance Absorption Experiments with the 63 sec Ag^{107} Isomeric State,"

report presented at the 3rd Intl. Conf. on the Mossbauer Effect, Cornell Univ.,
New York, 4-7 Sep 63

BIZINA, G.Ye.; BEDA, A.G.; BURGOV, N.A.; DAVYDOV, A.V.

Experiments on the resonance excitation of an isomer state in
Ag¹⁰⁷ with a mean lifetime of 63 seconds. Zhur. eksp. i teor.
fiz. 45 no.5:1402-1413 N '63. (MIRA 17:1)

..., G. Ye.; BEDA, A. G.; BURGOV, N. A.; DAVYDOV, A. V.

"Resonance Excitation of the Isomeric State of Ag^{107} with Mean Life 63 sec."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

ITEF (Inst Theoretical & Experimental Physics)

BISINA, G. Ye.; BEDA, A. G.; BURGOV, N. A.; DAVYDOV, A. V., Moscow

"The experiments on resonant excitation of the isomeric state of Ag^{107} with mean life time 63 sec."

report submitted for Intl Conf on Low & Medium Energies Nuclear Physics, Paris, 2-8 Jul 64.

BEDA, A.G.; KONDRAT'YEV, L.N.; TRET'YAKOV, Ye.F.

Cross section of Cd^{108} activation by thermal neutrons.
Atom. energ. 16 no.2:145-146 F '64. (MIRA 17:3)

L 47087-65 ENI(m)/I/EWA(m)-2

ACCESSION NR: AP5007017

S/0120/65/000/001/0020/0024

AUTHOR: Burgov, N. A.; Beda, A. G.

TITLE: Shaping a high-energy mu-meson beam

SOURCE: Priroda i tekhnika eksperimenta, no. 1, 1965, 20-24

TOPIC TAGS: mu-meson; high energy mu-meson

ABSTRACT: At the present time method of beam shaping would require too much energy at installation (10⁹ m long or 2 Gv/s) a new method of mu-meson beam shaping by a set of n parallel wires carrying a unidirectional heavy current is suggested. It is theoretically proven (including a numerically calculated case) that the above set of wires is capable of retaining in its vicinity most of mu-mesons yielded from the decay of pi-mesons. An experimental verification included a model which consisted of a 12-cm diameter 1-m long brass tube with a number of 1-mm copper wires stretched inside and deployed around a 1.6-cm

Card 1/2

147087-05

ACCESSION NR: AF5007017

circle; inside pressure was 0.01 torr. Monochromatic 200-1000-keV electrons simulated the mu-mesons. As the actual shaper was expected to be 60-m long and required currents up to 40 ka, its thermal and mechanical characteristics were studied on a 12-m section; the section was tested with 40-ka pulses and proved to be sturdy enough. Orig. art. has: 3 figures, 10 formulas, and 3 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE
(Institute of Theoretical and Experimental Physics, GKAE)

SUBMITTED: 29 Jan 64

ENCL: 03

SUB CODE: NP

NO REF SOV: 001

OTHER: 000

bjo
Card 2/2

BEDA, A.G.; KONDRAT'YEV, L.N.; TRET'YAKOV, Ye.F.

Half-life of Cd^{109} . Izv. AN SSSR. Ser. fiz. 29 no.7:1092 J1 '65.
(MIRA 18:7)

BEDA, E., inzh.; PETERSON, A., inzh.; BEGUNOV, I.; KALENT'YEV, V., inzh.;
PRIKHOD'KO, V., inzh.; CHERTKOV, V., inzh.; KOLOMYICHENKO, V.,
inzh.; BIKEYEV, V., inzh.; KOGUYENKO, B.

Exchange of experience. Avt. transp. 43 no.1:49-54 Ja '65.
(MIRA 18:3)

BEDA, Gy., Kandidat der technischen Wissenschaften

Data on a question of the experimental analysis of dynamic plastic traction. Acta techn Hung 49 no.3/4:311-317 '64.

1. Technische Universität für die Schwerindustrie, Lehrstuhl für Mechanik, Miskolc.

BEDA, G.A. (Moskva); YEPISHKIN, Yu.A. (Moskva)

Some problems in liquid film flow. Inzh.zhur. 1 no.2:60-68 '61.
(MIRA 14:12)

(Boundary layer)

BEDA, G.A. (Moskva)

Flow of a liquid film. PMTF no.3:110-111 S-O '61. (MIRA 14:8)
(Heat--Conduction) (Hydrodynamics)

BEDA, G.V., kand.pedagogicheskikh nauk

Comparative method in painting. Trudy NPI 74:63-70 '59. (MIRA 14:3)

1. Kafedra arkhitektury Novochoerkasskogo politekhnicheskogo in-
stitutu.

(Painting)

PHASE I BOOK EXPLOITATION

807/4086

Beda, L. M., L. N. Korolev, N. V. Sukhikh, and T. S. Frolova

Programma avtomaticheskogo differentsirovaniya dlya mashiny BESM (Automatic Differentiation Program for the BESM [High-Speed Electronic Computer])
Moscow, 1959. 19 p. (Series: Elektronnyye vychislitel'nyye mashiny)
500 copies printed.

Sponsoring Agency: Akadem'ya nauk SSSR. Institut tochnoy mekhaniki i vychislitel'noy tekhniki.

PURPOSE: This booklet is intended for programmers and engineers working in the field of computer technology.

COVERAGE: The booklet contains a general description of a program and method for the analytical differentiation of functions on the Soviet high-speed digital computer BESM. The method and program were worked out at the Institute of Precise Mechanics and Computer Technology, Academy of Sciences USSR. At the end of the book are found block-diagrams for BESM solution of the following mathematical problems: the representation of a mathematical expression by a sequence of pairs; the derivation of the derivatives of elementary pairs; and the synthesis of

Card 1/2

Automatic Differentiation Program (Cont.)

a formula for a derivative. No personalities are mentioned. There are no references.

807/4086

TABLE OF CONTENTS: None given

AVAILABLE: Library of Congress (QA76.8.B4B4)

Card 2/2

SOV/28-58-6-21/34

AUTHORS: Entin, I.I., Beda, N.A., Engineers

TITLE: The Development of a Standard for Converter Steel
(Sozdat' standart na konverternuyu stal')

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 70-72 (USSR)

ABSTRACT: In the last years, the technical conditions for experimental samples of converter steel have been developed. A comparison is made here with Bessemer steel. It has been shown that the resistance, the yield and lengthening values are the same for both types. Table 2 shows that the gas content in converter steel is equal to that in open-hearth steel. The chemical composition is given in table 3. The resilience of welding seams of open-hearth steel MSt.3kp and converter steel KSt.3kp is shown in table 4. It is recommended to develop a new standard for converter steel with new designations for the different steel types.

Card 1/2

BEDA, N.I., inzhener; KATSMEL'SON, G.M., inzhener.

Putting into practice flat-shaped ingot rolling in a thick-plate mill. Stal' 16 no.1:36-41 '56. (MLBA 9:5)

1. Zavod imeni Petrovskogo.
(Rolling (Metalwork) (Steel ingots))

FILIPOV, S.N., inzhener; BEDA, N.I., inzhener; BORISENKO, G.P., inzhener.

The adjustment of wire rolling mill guides. Stal' 16 no.7:614-619
J1 '56. (MLRA 9:9)

1. Zavod imeni Pervyskogo.
(Rolling metalwork) (Wire)

BEEM, N. I.

18 6 18 452c

Influence of Rolling Factors on the Quality of Bessemer Steel
Rails. N. I. Beem, N. A. Kotov, G. P. Baranov, and A. M.
Maltsev. (USSR, 1956, (10), 497-504) In Russian.

Large scale investigation on the quality of Bessemer steels in relation to (a) temperature of charging ingots into the soaking pits, (b) ingot temperature at the start of rolling in the blooming mill, (c) rolling factors in the mill and (d) roll wear. All these were found to affect quality appreciably. The degree of internalization of reduction on the blooming mill, to which internalization of reduction on the blooming mill could be effected depended on metal quality. Periodic treatment of rolls with a special cutter was required to avoid hair crack formation in the rail.—S. N.

zavod imeni Petrovskogo

AUTHOR: Beda, N.I., Borisenko, G.P., Ing., and Galemin, M.P. Dots. 133-5-12/27

TITLE: Rolling of rails using a split calibre on blooming mill rolls. (Prokatka rel'sov s primeneniye razreznogo kalibra v valkakh bluminga) v.1, No.5

PERIODICAL: "Stal'" (Steel), 1957, pp. 431 - 435 (U.S.S.R.)

ABSTRACT: This paper is a contribution to the discussion on the rational calibration of rails. The influence of the initial height of billets and the use of a fourth trapezoidal pass and changes in the shape and dimensions of the open (lower) part of the trapezoidal passes on the quality of rails was investigated. In order to eliminate the influence of steel making and other technological factors half of the ingots from each ladle of each experimental melt was rolled on a blooming mill 1000 in 17 passes into billets 210 x 165 mm (I series) or 220 x 165 (II series) and the second half of the ingots into billets 190 x 165 mm. Then all the billets were rolled according to Fig. 1 on a mill 800. The influence of the height of billet on the quality of rails is shown in Table 1. The trapezoidal pass with displaced line of split is shown in Fig. 2 and the deformation of metal in trapezoidal passes is shown in Figs. 3 and 4. Mechanical properties of rails rolled with 3 and 4 trapezoidal passes respectively were compared: bending

Card 1/2

BEDA, N.I.

AUTHOR: Beda, N.I., Head of the Central Plant Laboratory, im. 130-8-1/20
~~Petrovskiy Works~~

TITLE: Works Laboratories in 1957. (Zavodskiy laboratorii
v 1957 godu)

PERIODICAL: Metallurg, 1957, no.8, pp. 1 - 5 (USSR)

ABSTRACT: Heads of central works laboratories at various enterprises give reviews of current and projected research and development work. N.I. Beda of the imeni Petrovskiy Works, discusses an 8-m³ blast furnace which has been built and into which it is proposed to blow oxygen to give deep penetration and also coke-oven or natural gas and on whose stoves a new firing system is to be tried. He also mentions the following: de-sulphurisation of molten pig iron with lime is being studied; work on converters includes the use of oxygen together with iron oxides or lime/ore briquettes and process improvements to improve yields; further work is to be done on top blowing of open-hearth pig iron with pure oxygen in basic converters and on improved linings; the open-hearth and casting group have studied ingot shapes and pouring conditions and flat ingots have been advantageously adopted; improvements on rolling have followed studies of shearing and the use of bigger slabs for type 14X₂C steel; metallographic studies of the plate mill have led to considerable economies; the rolling-mill section are working on the provision

Card1/4

Works Laboratories in 1957.

130-8-1/20

basicity determinations.

Research work at the Azovstal Works (Zavod "Azovstal'") is described by M.T. Bul'skiy, F.F. Sviridenko and N.T. Berilov, engineers. There, fluxed-sinter practice is being adopted and radio-active isotopes are to be used for studying the movement of materials in the blast furnace and the wear of the lining; extensive work on the automation of the blast-furnace process. For steel-making, a sinter with a basicity of 5-7 is to be adopted because of favourable results in trials. Pre-refining of pig iron in ladles with oxygen/steam mixtures is being continued. Thermit-type mixtures are to be used in hot tops and ways of reducing ingot-cracking are being investigated. Rail failures and the possibility of using arsenic-containing steels are also being studied.

N.P. Zhetvin, head of the central works laboratory of the "Serp i Molot" Works, describes some of the most interesting of the fifteen researches carried out in collaboration with production personnel. These included the improved hot-top practice for killed-steel ingots, acceleration of decarburisation by vacuum-treatment (jointly with the Metallurgy Institute AN SSSR

Card3/4(Institut Metallurgii AN SSSR)), the use of different methods

BEDA, N. I.

AFANAS'YEV, S.G., kand.tekhn.nauk; BEDA, N.I., inzh.; MITROPANOV, A.A.,
RYZHKOV, P.Ya., inzh.; ~~KOTOV, N.K., inzh.~~; FILIPPOV, S.N. [deceased],
inzh.

Quality of converter rimmed steel produced with an oxygen blast.
Kislored 10 no.4:5-13 '57. (MIRA 11:2)
(Steel)

133-8-5/28

AUTHORS: Afanasyev, S.G., Shumov, M.M., Epshteyn, Z.D., Andryev, T.V., Beda, N.I., Korobov, I.I., Kostenetskiy, O.N., Lifshits, S.I., Rubinskiy, P.S. and Filipov, S.N.

TITLE: Production of steel in top oxygen blown converters. (Vyplavka konverternoy stali pri produvke kislorodom sverkhu).

PERIODICAL: "Stal'" (Steel), Vol. 117, No. 8, 1957, pp. 693-700 (USSR).

ABSTRACT: After transfer of the Bessemer melting shop to the top oxygen blowing converter practice, it produced 250 000 tons of steel. Summary of the operation of the melting shop is given in this paper. The melting shop consists of 3 converters of 16.5 m³ capacity, with a hydraulic tilting mechanism (Fig.1), with single layer lining from periclase-spinel bricks. Mean service life of the lining is about 150 heats. Lining bricks are ignited to 1680 for 8 hrs. The wear of converter lining is shown in Fig.2. Water cooled tuyere for oxygen blowing is shown in Fig.3. Waste gas purification system consists of scrubber, ventury scrubber and cyclone (Fig.4). The efficiency of gas cleaning: dust content reduced from 40-50 g/m³ to 0.2 - 0.5 g/m³ (Table 1). The composition of the pig iron supplied from a mixer was as follows: Si 0.5-1.0%, Mn 1.0-1.7%, S 0.04-0.10%, P 0.07-0.11%. As a cooling

Card 1/4

133-8-5/28

Production of steel in top oxygen blown convertors. (Cont.)

first blowing period are shown in Figs. 6 and 7 respectively in the form of frequency curves. A number of experimental melts with single slag was also carried out with satisfactory results. The comparison of nitrogen content in convertor and open hearth steels (CT.3 k η) in the form of frequency curves is shown in Fig. 8. The comparison of the operating results using additions of ore in small portions and addition of ore before blowing with water additions to oxygen for the control of metal temperature during blowing is given. The monthly output of the shop increased from 13 450 t in October 1956 to 42 323 in May 1957. The monthly consumption of materials per ton of steel is given in Table 2 and the frequency distribution of melts with different yields in Table 3. The duration of blowing period varied from 13 to 22 min. The duration of the whole production cycle should be 32 min. but in actual fact it lasted longer due to longer blowing times and organisational stoppages. It is concluded that as a result of the introduction of the practice of blowing basic pig iron with technically pure oxygen from the top in basic convertors, mild rimming steel is produced little different in properties from the

Card 3/4

FILIPPOV, S.N. [deceased]; BKDA, N.I.; KRASOVSKIY, L.V.; RYSHKOV, P.Ya.;
MASHKOVA, A.K.

Rails made of basic converter steel (with upper oxygen blast).
Bnl. TSNIIOHM no.22:51-52 '57. (MIRA 11:5)
(Railroads—Rails)

FILIPPOV, S.N. [deceased]; BEDA, N.I.; ALIMOV, I.G.; RYZHKOV, P.Ya.; LEVIN,
P.G.; GORYUCHKO, I.G.; ZADOROZHNYA, M.A.; VOLKOVA, L.A.

Building up steel rolls. Bul. TSHIICHM no.22:54-55 '57.
(MIRA 11:5)

1. Zavod im. Petrovskogo.
(Electric welding) (Rolls)

AUTHORS: Beda, N.I. and Kotov, N.K., Engineers SOV/133-58-6-14/33

TITLE: In the Plant imeni Petrovskiy (Na zavode im. Petrovskogo)

PERIODICAL: Stal', 1958, Nr 6, pp 518 - 519 (USSR).

ABSTRACT: 1) An improvement in the technology of the converter process with top blowing with technically pure oxygen in order to increase the yield of good metal and stability of a basic lining. It was established during an investigation of 1 030 experimental heats that during blowing of mild converter rimming steel, the process can be carried out without the removal of slag. The sulphur and phosphorous content do not increase, the yield of metal increases and the duration of heat is decreased by 2.5 to 3 minutes. The stability of the chrome-magnesite lining is not affected. The results of experimental heats (336 heats) in which additions of iron ore in the course of blowing instead of water were made, indicated that the yield of metal increases (due to the reduction of ore) and the spraying out of metal decreases. The proportion of overheated melts (temperature above 1 630 °C) does not increase but the proportion of heats with the content of sulphur above 0.051% increases. The use of ore-lime briquettes was also tested. The yield of metal increases by 1 - 1.4%, the duration

Card 1/4

In the Plant imeni Petrovskiy

SOV/133-58-6-14/33

of heat decreases by 2 min., the content of sulphur and phosphorus remains unchanged, the proportion of overheated heats decreases by a factor of 2. The experiments are being continued. An investigation of the dependence of the sulphur content in blown metal on the sulphur content of pig established that in order to obtain sulphur in steel not higher than 0.04%, the pig iron should contain no more than 0.05% S, not less than 1.5% Mn and not more than 0.6 - 0.7% Si. As a result of these investigations, the output of the melting shop increased by 4% and mean life of lining increased 2-5 times. The costs of production of steel decreased by 30%.

2) An investigation of the quality of oxygen-blown converter metal in order to widen the field of its application. The production of oxygen-blown converter metal in 1957 amounted to 45% of the total production of steel on works. In chemical composition, mechanical and technological properties, the metal completely corresponded to appropriate standards (ChMTU 5567-56, GOST 380-50, GOST 4231-48, etc). In the content of gases (nitrogen, oxygen and hydrogen), macro and micro-structure, weldability, impact strength at normal, after artificial ageing at + 20 °C and at negative temperatures

Card 2/4

In the Plant imeni Petrovskiy

SOV/133-58-6-14/53

(0 °, -20 °, -40 ° and -60 °C) rolled products from oxygen-blown converter metal were practically the same as from a corresponding open-hearth metal. On the basis of the investigation of properties of the oxygen-blown converter metal, new standards were developed and approved for rolled semis for telegraph wire from steel KTO9 (ChMTU-TsNIICHM 1-57 instead of GOST 5567-56 and ChMTU-TsNIICHM 2-57) and for crane rails from steel K62 (ChMTU-TsNIICHM 3-57). The requirements in these standards do not differ from those for open-hearth metal.

3) An investigation of the durability of refractories and the development of technology of production of refractory bricks for lining top-blown converters operating with oxygen blast.

An increase in the durability of chrome-magnesite bricks was obtained by a rational method of firing, final temperature 1 700 °C soaking for 8 hours, from 1 520 °C the rise of temperature being 5-7 °C/hr. This method of firing increased the softening temperature under load to 1 670 - 1 680 °C. The service life of converter linings increased by a factor

Card 3/4

In the Plant: imeni Petrovskiy

SOV/133-58-6-14/33

of 2.5 and the consumption of bricks per ton of steel decreased by a factor of 2. The work on further improvement of the refractory lining is being continued.

1. Steel--Production 2. Steel--Quality control 3. Furnaces
Card 4/4 --Operation 4. Oxygen--Applications 5. Refractory materials--Effec-
tiveness

AUTHORS: Beda, N.I. and Kotov, N.K., Engineers SOV/133-58-6-31/33

TITLE: In the Plant imeni Petrovskiy (Na zavode im. Petrovskogo)

PERIODICAL: Stal', 1958, Nr 6, p 575 (USSR).

ABSTRACT: An improvement in the technology of production of cast iron ingot moulds in order to increase their durability. In 1957, the consumption of ingot moulds on the works decreased by 3-5 kg/ton of steel. This was due to: a) casting of closed bottom ingot moulds with top edges bevelled and a cast belt in the form of a local thickening. The life of 436-ton ingot moulds increased from 45 to 65 castings; b) the use of a new type of ingot mould, 3.5-tons for killed metal, rolled into sheets. Ingot moulds are cast with longitudinal ribs on wide faces and a ring-like belt, protecting the mould from the formation of longitudinal and transverse cracks; c) successful mastering of the technology of casting durable ingot moulds using a mixture of blast furnace (50%) and cupola (50%) iron.

Card 1/1 1. Molds--Production 2. Cast iron--Applications 3. Cast iron--Casting

SOV 133-58-7-19/27

AUTHORS: Beda, N.I. and Kotov, N.K., Engineers

TITLE: At the Works imeni Petrovskiy (Na zavode im. Petrovskogo)

PERIODICAL: Stal', 1958, Nr 7, pp 641 - 642 (USSR)

ABSTRACT: 1) An investigation of conditions under which coefficients of consumption of metal in rolling mills can be decreased. On a rail mill, a decrease in the consumption of metal was obtained mainly in the rolling of square semis from rimming and tube metal. The economy was obtained due to the following measures: rational cutting of hot products rolled on mill 800; the use of ingots of weights appropriate to the weight of the semis rolled; introduction of 5-ton ingots of rimming metal in addition to 4.2-ton ingots; the use of an addition of a thermal mixture to the head part of rimming ingots ($1/3$ scale and $2/3$ calcined sand) and an improvement in the quality of the surface of ingots (by changing teeming conditions). A decrease of metal consumption in the production of round tube semis was obtained due to: shortening of ingot tops (450-mm instead of 600-mm with an increased conicity of their side faces (20% instead of 10%); thus decreasing the weight of ingots (from 4.36 ton to 4.27 tons) and the Card1/2 weight of the crop end (from 15.5 to 14.5%) without any

At the Works imeni Petrovskiy

SOV/133-58-7-19/27

deterioration of the macrostructure of tube semis; a decrease in the bottom crop end from 2 to 1% and a redistribution of a 1% bottom crop end between blooming shears (0.5%) and hot-cutting saws. Economies on other mills were obtained by measures similar to the above quoted. The economy in rolling sheets was due to the introduction of cold rolling.

2) An investigation of electrofacing of steel rolls with hard alloys.

On the basis of the results of an investigation a considerable improvement of the technology of an automatic hard facing of worn roll passes was obtained.

1. Metals--Processing 2. Rolling mills--Performance 3. Rolling mills--Maintenance

Card 2/2

BEDA, N. I.

SOV/133-58-7-21/27

AUTHORS: Ryzhkov, P.Ya., Engineer, Mitrofanov, A.A., Candidate of Technical Sciences, ~~Beda, N.I.~~, Engineer and Livshits, G.L., Candidate of Technical Sciences

TITLE: Properties of Metal Produced in Oxygen-blown Converters (Svoystva metalla, poluchennogo v konverterakh s produvkoy kislorodom)

PERIODICAL: Stal', 1958, Nr 7, pp 643 - 647 (USSR)

ABSTRACT: In the first half of 1957, on the works imeni Petrovskiy, over 300 000 tons of metal was produced in converters blown with technically pure oxygen. After rolling this was delivered to consumers instead of open-hearth metal. The following types of steel were produced: K2kp, K3kp, OKM, K10sp, K5sp, K62 (rail steel and AKNL (low alloy for accessories). In view of the above, an investigation of the properties of converter steels and their comparison with open-hearth steels was carried out. A comparison of the mean chemical composition of various converter steels (nominator) with the standard composition of corresponding open-hearth steels (denominator) together with standard deviations (in brackets) - Table 1; frequency curves of the content of carbon (A), manganese (B), phosphorus (V) and sulphur (G) in steel St. 3kp,

Card1/3

SOV/133-58-7-21/27
Properties of Metal Produced in Oxygen-blown Converters

produced by converter (a), Bessemer (b) and open-hearth (v) processes - Figure 1; frequency curves of nitrogen content in St. 3kp steel produced by converter (a) and open-hearth (b) processes - Figure 2; mean content of gases in rolled products from converter (K), open-hearth (M) and Bessemer (B) metal - Table 2; frequency curves of values for yield point (A), yield strength (B), relative elongation (V) and relative reduction (G) of steel St. 3kp produced by converter (a), open-hearth (b) and Bessemer (v) processes; impact strength at various testing temperatures and after artificial ageing of specimens from various rolled products from converter (nominator) and open-hearth (denominator) metal - Table 3; mechanical properties of welded specimens from open-hearth (M) and converter (K) St. 3kp steel - Table 4. It was found that properties of the metal (of a similar composition to that of open-hearth) produced from pig iron in oxygen-blown converters with basic linings are equal to those of open-hearth metal and correspond to the requirements of standards MChTU 5567-56; GOST 380-50 and GOST 4231-48 for open-hearth metal. The content of

Card 2/3

Properties of Metal Produced in Oxygen-blown Converters

SOV/133-58-7-21/27

gases, macro- and microstructure as well as weldability of rolled products produced from converter metal of heats investigated are practically the same as those from open-hearth metal. Tests of specimens from rolled converter and open-hearth steel for impact strength at various temperatures and after artificial ageing did not show any substantial difference in the indices. Testing conditions were practically the same. The quality of the usual and telegraph wire from converter metal did not differ from that made from open-hearth metal. There are 4 tables and 3 figures.

ASSOCIATIONS: Zavod im. Petrovskogo (Plant imeni Petrovskiy) and TsNIICHM

Card 3/3

1. Metals--Production 2. Metals--Properties 3. Blast furnaces
--Operation 4. Oxygen--Applications

BEDA, Nikolay Ivanovich; GOL'DENBERG, Ye.A., otv.red.; BELINA, R.A.,
red.isd-vs; ANDREYEV, S.P., tekhn.red.

[Ways of reducing metal waste in rolling mills] Puti snizhenia
raskhoda metalla v prokatnykh tsekhakh. Khar'kov, Gos.nauchno-
tekhn.isd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960.

125 p.

(MIRA 13:7)

(Rolling mills--Quality control) (Steel ingots--Defects)

S/130/61/000/004/002/005
A006/A001

AUTHORS: Beda, N.I., Ryzhkov, P.Ya.

TITLE: About the Quality of Converter Metal

PERIODICAL: Metallurg, 1961, No. 4, pp. 13 - 16

TEXT: The industrial assimilation of converter metal produced with oxygen blast was started at the Plant imeni Petrovskiy in 1956 and a large number of experimental data was gathered. The results obtained show the full identity of qualitative characteristics of open hearth steel and of rimming and killed converter steel produced with top blast using oxygen of 98 - 99% purity. The steels were compared to open hearth steels as to their gas content, chemical composition, micro and macrostructure, content of non-metallic impurities, mechanical properties, cold embrittlement and weldability (Tables 1, 2, 3, 4). Welding tests performed at the Institute of Electric Welding imeni Ye.O. Paton showed that the properties of weld joints made with experimental oxygen-blown converter steel and open hearth conventional steel were equivalent. The same welding technology and filler materials may be employed for both types of steel. They are equal as to

Card 1/6

About the Quality of Converter Metal

S/130/61/000/004/002/005
A006/A001

their dynamical strength. Analogous results were obtained at the Proyektstal'-konstruktsiya Institute and a number of plants. Wheel rims for ЗИЛ-164 (ZIL-164) trucks were manufactured of converter and open hearth steel by extrusion. Satisfactory results were obtained. Rejects, due to cracks in the welds, caused by stretching, were 0.87 and 0.71% respectively. The investigation proved the suitability of converter metal for large-scale industrial use. Its quality will be raised by increasing the purity of oxygen in the blast to 99.5%.

Table 1: Gas content in converter and open hearth steel

Сталь Steel	Профиль Shape	Газовое содержание газов, %tent			Place of Место анализа analysis
		O ₂	N ₂	H ₂	
KSt. 3kp KСт. 3хп	# 20 beam Балка № 20	0.003-0.006 0.0046	0.0038-0.006 0.004	0.00015	Plant im. Petrovs- Завод им. Петровского kly
MSt. 3kp MСт. 3хп	billet Сутунка 90х'0 мм # 20 beam Балка № 20	0.006-0.020 0.0102	0.0045-0.0085 0.006	0.00019	То же "
KСт. 10sp KСт. 1хп	Круг 90 мм circle	0.002-0.019	0.005-0.008	0.00006	" "

Card 2/6

About the Quality of Converter Metal

S/130/61/000/004/002/005
A006/A001

Table 1 continued-

		0.0035	0.007		
MSt. 10sp	To же "	0.002—0.014	0.001—0.007	0.00023	" "
MСт. 10сп		0.0061	0.005		
KSt. 25G2S	billet	0.002—0.004	0.007—0.0095	0.00028	" "
KСт. 25Г2С	Сутунка 58×58 мм	0.0035	0.008		
KSt. 62 sp	crane rails	0.001—0.006	0.002—0.010	0.00020	" "
KСт. 62сп	Крановые рельсы	0.0027	0.006		
MSt. 62sp	"	0.0021	0.007	—	Kuznetsk Combine
MСт. 62сп	To же "	0.006	0.006	—	Proyektstatal' konstrukt-
KСт. 3кп	Лист 20 мм sheet	0.009	0.006	—	Кузнецкий комбинат
KСт. 3кп	"	0.003	0.003	—	Проектстальконструк-
MСт. 3кп	To же "	0.0088	0.0044	—	ция
KСт. 3кп	"			—	To же
MСт. 3кп	"			—	Institute of Electric
KСт. 3кп	"			—	Институт электро- Welding
MСт. 3кп	"			—	сварки им. Патона
KСт. 3кп	"			—	им. Ye.O. Paton
MСт. 3кп	"	0.0070	0.0047	—	To же

* The mean gas content is shown in the denominator of fraction

Card 3/6

About the Quality of Converter Metal

8/130/61/000/004/002/005
A006/A001

Table 2: Comparison data on relative elongation of converter and open-hearth steel

Relative elongation, %, 10 ¹ %	Сталь К-3хнв		Сталь М-3хнв	
	количество тепловых пунктов	%	количество тепловых пунктов	%
22-23,9	15	3,57	35	4,7
24-25,9	22	5,23	98	13,3
26-27,9	61	14,5	159	21,7
28-29,9	85	20,1	181	24,6
30-31,9	120	28,5	166	22,6
32-33,9	64	15,2	69	9,4
34-35,9	37	8,8	19	2,6
36-37,9	16	3,8	8	1,0
38-39,9	1	0,3	1	0,1
Total Итого	421	100	735	100

a - 3 кп (3кп) converter steel
b - 3 кп (3кп) open-hearth steel
c + d - Number of heats

Card 4/6

About the Quality of Converter Metal

S/130/61/000/004/002/005
A006/1001

Table 3: Comparison data on the yield limit of converter and open-hearth steel

Yield limit Предел текучести σ_s кг/мм ²	Сталь К-3кн		Сталь М-3кн	
	количество плавов с	%	количество плавов d	%
24	7	0.28	2	0.3
24-25.9	47	1.92	34	4.5
26-27.9	173	7.08	127	17.0
28-29.9	414	16.8	167	22.4
30-31.9	749	30.5	188	25.2
32-33.9	623	25.4	140	18.8
34-35.9	318	13.0	70	9.4
36-37.9	82	3.36	15	2.0
38-39.9	30	1.22	4	0.4
40-41.9	9	0.36	—	—
42	2	0.08	—	—
Total Итого	2454	100	747	100

a - 3kp converter steel
b - 3kp open-hearth steel
c + d - Number of heats

Card 5/6

S/130/61/000/004/002/005
A006/A001

About the Quality of Converter Metal

Table 4: Data of determining the threshold of cold embrittlement

Sheet thickness mm	Method of melting	Number of heats	Range of transition into brittle state, °C			
			3kp steel		3sp steel	
			beginning	end	beginning	end
12	Converter	2	+100	-5	+50	-50
	Open-hearth	1	+100	-10	+50	-50
20	Converter	2	+120	-10	+80	-20
	Open-hearth	1	+100	-10	+80	-20
30	Converter	+	+120	0	+100	-20
	Open-hearth	1	+120	0	+80	-20

There are 4 tables.

ASSOCIATION: Zavod imeni Petrovskogo (Plant imeni Petrovskiy)

Card 6/6

S/133/61/000/007/005/017
A054/A129

AUTHORS: Boda, N. I., Katov, N. K.

TITLE: News in brief

PERIODICAL: Stal', no. 7, 1961, 610

TEXT: 1) In the metallurgicheskiy zavod im. Petrovskogo (Metallurgical Plant im. Petrovskiy) tests are being carried out to replace bauxite by fluorite in the production of oxygen converter steel. Addition of 1.4 - 1.5 kg fluorite per ton of steel in rigid sack-bottom converters having a basic (magnesite-chromite) lining greatly accelerated the slag-formation in the first 3 - 5 minutes; it also promoted the blast and raised the basicity of the primary slag from 1.1 - 1.2 to 1.5 - 2.3. This improved operating conditions of the lining and increased its service life from 141 to 204 smeltings. The specific consumption of periclase-spinellide bricks could moreover be reduced from 16 to 11 kg/ton of steel. 2) 35ГC (3508) steel is produced instead of the 25Г2C (25028) brand; the new steel contains 0.40% less manganese but it has the same mechanical properties as the steel it replaces. Manganese consumption could be reduced by 12 kg/ton of steel and the cost of the metal by 1.1 - 1.2 rubles/ton. 3508 steel is suitable for reinforcement wire 6 mm in diameter.

Card 1/1

S/133/61/000/007/008/017
A054/A129

AUTHORS: Beda, N. I., Kotov, N. K.

TITLE: News in brief

PERIODICAL: Stal', no. 7, 1961, 615

TEXT: 1) In the metallurgicheskiy zavod im. Petrovskogo (Metallurgical Plant im. Petrovskiy) a ГΥΠ-Co-0.5-1 (GUP-Co-0.5-1) type gamma defectoscope and a portable KC-7-0.13 (KS-7-0.13) container (165 kg) with radioactive cobalt is used on an industrial scale to study the metal structures and special parts of metal products, the welding seams of supporting steel struts, window frames, containers, etc., as well as large castings and heavy hammered products. 2) Three units were put into operation for the automatic electric surface-layer welding of large-size products, moreover apparatus for the vibrating-arc and electro-slag smelting. The technology for 19 various castings, a new nomogram for the velocities of surface-layer welding of circular products have been established. Suitable alloyed steels for substitution were selected, the conditions of forging and those of heat treatment after forging have been improved. Some of the products are surface-hardened. Due to the above modifications the service life of various exchangeable parts in-

Card 1/2

News in brief

S/133/61/000/007/008/017
A054/A129

creased 2 - 10 times. 3) In cooperation with the Proyektno-konstruktorskiy tekhnologicheskii institut (Technological Institute for Design and Construction) some modifications have been made in the construction of the slag-ladle of open-hearth furnaces. In the supporting rings of the 11 m³ capacity ladles elliptical apertures were made allowing a natural air flow. This ensures a more uniform heating and cooling of the side-wall surface of the ladle and increased its service life 1.5 times.

Card 2/2

S/133/61/000/007/017/017
A054/A129

AUTHORS: Beda, N. I., Kotev, N. K.

TITLE: News in brief

PERIODICAL: Stal', no. 7, 1961, 664

TEXT: 1) In the metallurgicheskii zavod imeni Petrovskogo (Metallurgical Plant imeni Petrovskiy) ways and means were found to lower the consumption coefficients of rolling processes. In 1960 a considerable saving in cast and rolled metal was effected by reducing the bottom crops by 1% and the head crops by 3%, by producing more light-weight sections and rolling with negative allowances, as well as by mounting an automatic reduction control device on the blooming mill in addition to two photoelectric pyrometers to control the temperature at the beginning and end of rolling and by applying more accurate roll-pass designs when rolling special sections. 2) Tests were carried out to improve the quality of tube steel. The causes of surface defects of tubings 90 mm in diameter rolled on 800-mm roll stands from 4.27-t carbon steel ingots were investigated. The output of first-class product was raised by 1% when the following measures were taken: rigid-bottom ingot molds were used with straight instead of curved edges, a flatter bottom

Card 1/2

News in brief

S/133/61/000/007/017/017
A054/A129

and dozzles with a double conicity; the upper part of the ingot mold was planed in such a way that a flange of 10 - 12 mm was formed at each edge, preventing the sticking of the ingot; a better method was established for adjusting the ladles to bottom-casting; the configuration of square and oval pre-finishing roll-pass designs were changed in the rolls of the 800-mm blooming mill. By filling the oval caliber entirely, the depth of grooves and cracks in the metal did not increase when rolled again in the circular finishing roll-pass design.

Card 2/2

BEDA, N.I., inzh.; RYZHKOV, P.Ya., inzh.; GORYUCHKO, I.G., inzh.;
MASHKOVA, A.K., inzh.; Primali uchastiye: LIFSHITS, S.I.;
KOTOV, N.K.; KOSHCHAYEV, A.D.; CHUVICHKINA, N.K.; KOLPOVSKIY,
N.M.; GOLOVKO, O.F.; LUDENSKIY, A.M.; SERBIN, I.V.; IVANOV, I.T.;
ALEKSEYEVA, N.V.; MENDEL'SON, N.Ya.

Quality of pipe billets and pipes made of killed converter steel.
Stal' 21 no.9:824-825 S '61. (MIRA 14:9)

1. Metallurgicheskiy zavod im. Petrovskogo i Truboprokatnyy
zavod im. Lenina.

(Pipe, Steel)

BEKA, N.I.; KOTOV, N.K.

Research carried out at the Petrovskii Metallurgical Plant.
Stal' 22 no.6:543 Je '62. (MIRA 16:7)
(Dnepropetrovsk-Rolling(Metalwork))

BEDA, N.I.; KOTOV, N.K.

Research at the Petrovskii Metallurgical Plant. Stal' 22
no.7:619 JI '62. (MIRA 15:7)
(Bessemer process)

BEDA, N.I.; KOTOV, N.K.

Research carried out at the Petrovskii Metallurgical Plant.
Stal' 22 no.9:790 S '62. (MIRA 15:11)
(Dnepropetrovsk--Metallurgical research)

BEDA, N.I., inzh.

Reducing the amount of crop by improving the shape of riser
heads. Stal' 23 no.10:903-904 0 '63. (MIRA 16:11)

1. Metallurgicheskiy zavod im. Petrovskogo.

DOLGOKER, Yu.P.; PASHUTIN, N.V.; ZHIGULIN, V.I., inzh.; BEDA, N.I., inzh.;
RYZHKOV, P.Ya., inzh.; GAVRILOV, A.I., inzh.; CHEKHRANOV, V.D.,
kand. tekhn. nauk

New developments in research. Stal' 23 no.10:928-929 0 '63.
(MIRA 16:11)

DOLGOKER, Yu.P.; UTSIS, L.M.; BEDA, N.I.; BOGOMOLOV, L.A.; DEMIDOVICH,
Ye.A.; PINDYURIN, N.I.

Adopting economically shaped light weight rolled products
in U.S.S.R. plants. Met. i gornorud. prom. no.1:66-70
Ja-F '64. (MIRA 17:10)

LEYKIN, I.M.; LEBEDEV, Yu.I.; ANDREYEV, I.I.; BEDA, N.N.; Prinimali uchastnye: LIVSHITS, G.L.; TEREENT'YEVA, Ya.K.; FILONOV, V.G.; GONCHAROV, I.A.; NAFTALOVICH, S.M.; KUPRIKOV, P.Z.; ABEKINA, R.I.; ROSHCHINA, A.A.; LUPYAKOV, A.G.

Steel of the 18G2-grade. Sbor. trud TSNIICHHM no.35:92-101 '63.
(MIRA 17:2)

BEDA, P., inzhener-kapitan

Methods of instrument checking. Part 1: Checking by means of
eddy currents. Av. 1 kosm. 46 no.5:45-48 My '64.

(MIRA 17:7)

L 3855-66 EWT(d)/EWT(m)/EWP(w)/EWP(f)/EWP(c)/EWP(v)/T-2/EWP(k)/EWP(l)/ETC(m)

WW/EM

ACCESSION NR: AP5024826

UR/0032/65/031/010/1263/1264
620.179.1-1.05

52
8

AUTHOR: Beda, P. I.; Parshin, I. P.

TITLE: The VDZL-64 electric induction flaw detector for inspection of vane channels

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1263-1264

TOPIC TAGS: turbine blade, flaw detection, metal inspection

ABSTRACT: The article is a description of the VDZL-64 flaw detector patented in 1962 (Author's Certificate No. 156735 published in *Byulleten' izobreteniy* No. 16, 1963). The instrument is designed for detection of surface flaws in nonmagnetic refractory materials in the lock channels of turbine blades in power machines. The instrument is sensitive to surface cracks 0.6 mm long and 0.15 mm deep with an opening of 0.0005 mm and greater. The device also detects subsurface nonmetallic inclusions to a depth of 1 mm. The flaw detector weighs approximately 20 kg, operates from a 220/127 v, 50 cps or 115 v, 400 cps power supply and generates eddy currents with a frequency of 300 kc. The device operates on the principle of comparing two symmetrically located channels on a single blade using two induction coils connected

Card 1/2